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which, according to our analysis, are the most fundamental ones find in the sphere of logic. It is believed, however, that it is sufficient to show that at least something may be usefully suggested by considering this science in this light.

Five hundred and eighty-third Meeting.

May 28, 1867. — ANNUAL MEETING.

The PRESIDENT in the chair.

The following Report of the Council upon the changes which had occurred in the Academy during the past year was presented.

IN surveying the events of the past year, as respects the membership of the Academy, the Council would first call attention to the losses which we have sustained, and would put upon record some brief tribute to the memory of our deceased associates. We have lost six Fellows, two Associate Fellows, and one Foreign Honorary Member, — nine in all.

Four of the six taken from our immediate circle, Messrs. Hayward, Mussey, Swett, and Jenks, were well advanced in years; two, Dr. Gould and Dr. Bryant, were suddenly removed from active life and stations which they might have been expected much longer to adorn. All have left names and memories to be affectionately cherished by this society.

JAMES HAYWARD was born in Concord, Massachusetts, in the year 1786, and died July 27, 1866. His youth was passed on his father's farm, first in Concord, and afterwards in Plainfield, Hampshire County, to which place his father removed when James was eight years old. Anxious to obtain a liberal education, he left his home at the age of eighteen, in the hope of finding in Boston employment that would give him the means of accomplishing his purpose. After three years of fruitless effort he returned to his old home, and took the management of his father's farm, teaching school in winter, and studying at intervals. It was not until 1815, when he was twenty-nine years old, that he was able to carry out his purpose of entering college at Cambridge. Graduating in 1819, he entered the Divinity School, and went through its course, but having been appointed tutor in mathematics in the College in 1820, he continued in that office until 1826, when he became Professor of Mathematics and Natural Philosophy. The very next year, however, he resigned his professorship, to devote himself to Civil Engineering; and the same year he was appointed a member of the State Board of Internal Improvements, and also engineer to this Board.

His first work appears to have been a survey, made in 1827, of a line from Boston to Providence for a railroad to be worked by horse-power. This was followed by a survey of a line from Plymouth to Wareham. In 1829 he visited Pennsylvania and Maryland, and made a report on the internal improvements of those States. These and similar labors give him an honorable place among those who introduced the railway system into Massachusetts. Subsequently (1836 to 1845) he was engineer of the Boston and Maine Railroad, the greater part of which was built by him. He was President of this road from 1853 to 1856. Mr. Hayward also took an early interest in the preservation of the harbor of Boston, and was a member of the first Board of Harbor Commissioners. Besides the extended surveys then made, and others ten years later, as a Commissioner on the third Board he was consulted, in 1850, by a Committee of the Legislature on the Harbor, and in 1853 by a Commitiee of the City Government on the Harbor, and made reports to both these bodies. In the former of these reports he recommended the building of a sea-wall along the northern border of the South Boston flats to Fort Independence, which is one of the main features in the present plans for improving the harbor. Mr. Hayward was elected into this Academy in 1834.

At the close of his long and useful career, Mr. Hayward testified his love of science and his interest in the elevation of his fellow-men by many noble bequests. Among the most important of these were three of $ 20,000 each to the Observatory at Cambridge, to the Massachusetts Institute of Technology, and to the Unitarian Association, for the support of foreign missions.

DR. REUBEN DURRAND MUSSEY died in Boston on the 21st of June, 1866, at the age of eighty-six years, having been born at Pelham, New Hampshire, June 23, 1780. His childhood was passed in different country towns of New Hampshire, in which his father successively resided, until, at the age of twenty-one, he entered the Junior class at Dartmouth College. He pursued his medical studies at the same institution, under the tuition of the celebrated Professor Nathan Smith, and afterwards at the University of Pennsylvania, from which he took the degree of Doctor in Medicine in 1809. Dr. Mussey was a representative of a class not uncommon in New England, of young men early thrown upon their own resources, whose diligence, enterprise, good sense, and indomitable self-reliance have gradually conducted them to elevated positions in society. He was an original thinker, an honest reformer, a leader rather than a follower of public opinion. While a student at Philadelphia he instituted some important experiments on the subject of cutaneous absorption, which gave distinction to his name then and afterwards. He began the practice of medicine at Salem, with much success; and took at once so marked a position that he was elected into this Academy at the anniversary meeting in 1811, fifty-six years ago. He was soon (in 1814) made Professor of the Theory and Practice of Medicine in Dartmouth College, where he was the principal pillar of the Medical School, lecturing simultaneously on three several departments of medical science. His practice, especially in surgery, was large and arduous. His celebrity as a teacher procured for him invitations to join the medical schools of several of the most important cities of the West, and ended in his establishment at Cincinnati as one of the principal professors in the Ohio Medical College. After fourteen years in this service, and six in connection with the Miami Medical College, he resigned his official duties, and returned to spend a serene old age among his friends and kindred in Boston.

Dr. Mussey was a prominent friend of temperance; and his unsparing efforts, both by precept and example, have done much to abate the abuse of stimulating liquors in our own country, if indeed that crying evil can be said to be yet abated. His opinions as to diet were those of an ultraist. It is well known, that he subsisted for the last thirty years of his life without meat or stimulants, confining himself wholly to vegetable food, water, and milk. It is probable that he will not have many followers in this ascetic mode of living; yet, as he enjoyed unusual health and activity of body and mind to a very advanced age, his example, added to others previously known, may at least help to establish the fact that such a diet, when not contra-indicated, is safe and salutary, as it is economical.

DR. AUGUSTUS ADDISON GOULD died in Boston, suddenly, of cholera, on the 15th of September last, in the sixty-first year of his age. He was born at New Ipswich, New Hampshire, April 23, 1805. When old enough to labor, the larger part of the year was given to his father's farm, — a few winter months to the common school. When only fifteen years old he took the whole charge of the farm, but still managed to secure a few months for study, so that, after a year in an academy, he was able to enter Harvard College, in 1821; although, as he tells us, so ill prepared that his college life was a continual struggle to overcome the barriers which straitened means had placed between himself and the things he aspired to. By severe industry and strict economy he made his way, both as to livelihood and learning, and was graduated with respectable rank. He became a private tutor in Maryland, and at the same time began the study of medicine, which he completed in Boston, passing a year in the Massachusetts General Hospital, as house student, and taking his degree of M. D. in 1830. His struggle with poverty was not yet ended. He had to undertake various tasks, the most Herculean of which was the preparation of the catalogue, in four large folio volumes, of the fifty thousand pamphlets in the library of the Boston Athenæum. But he always found some time for the scientific studies in which he soon became eminent. His taste for Natural History, which had begun to show itself in college, especially in the way of botany, now took its particular bent. His first scientific memoir, communicated to the Boston Society of Natural History, — of which he was one of the earliest, and always one of the most efficient members, — was on the *Cicindelæ* of Massachusetts. The next was a monograph of the species of the genus *Pupa*, found in the United States, in which he points out how their classification might be improved by the use of the microscope. In 1841 he read before the same society a paper on the geographical distribution of the shells of Massachusetts, dealing with considerations which had at that time attracted little attention. He showed the proportion between the marine and the fresh-water species (forty-two of the latter to two hundred and three of the former), and stated that, on a careful comparison, he was unable to satisfy himself that any of the fresh-water species were common to the Old World and the New; and, finally, he indicated the fact that Cape Cod forms an impassable barrier to the extension of many marine species.

But the most considerable of his earlier contributions to science was his Report on the Invertebrate Animals of Massachusetts, chiefly devoted, however, to the Mollusca. Up to this time there had been few if any attempts at so complete a survey of the zoölogy of any particular region of the United States. This fills a volume of 400 pages, illustrated by more than 200 figures skilfully drawn with his own hands, and every species was described anew, — the whole in a manner to attract the attention and admiration of naturalists, both at home and abroad, and to secure for the author a prominent position in their ranks. His largest and most important work was that upon the shells of the United States Exploring Expedition under Captain Wilkes, the text of which fills a large quarto volume, the illustrations an imperial folio atlas. This was undertaken under peculiar difficulties, growing mainly out of the fact that Captain Couthouy, by whom the collection was chiefly made, had left the expedition before the voyage was finished; that the shells were not well cared for, and were much confused at Washington before Dr. Gould was called to the rescue of this very valuable collection. The published results of his investigation are comprised, not only in the generic and specific characters and descriptions, but in some valuable generalizations and suggestions in the introductory part of the volume, upon geographical distribution, upon what are called representative forms, urging also that animals from widely distant or dissevered regions should be assumed to be different, however close their resemblance, until their identity can be proved, — a rule, the earlier recognition of which would have saved much labor and confusion in the determination of synonymes. He also here indicates the fact that shells of particular and separated regions have each a physiognomy of their own, just as have the human races.

Of Dr. Gould's numerous lesser scientific labors and writings the most noteworthy are his completion of the admirable work on the Terrestrial Air-breathing Mollusca of the United States, left unfinished by the late Dr. Binney; a portion of the Principles of Zoölogy, written conjointly with Professor Agassiz; accounts of collections of shells received from Rev. Francis Mason, missionary to Burmah, from Doctors Savage and Perkins, missionaries to Africa, and from Dr. Bates, U. S. N., from the coast of Liberia; also of collections made in the Pacific Railroad Surveys and other expeditions. These papers all relate to conchology, in which he was high authority. But that his scientific interests and activities were not restricted is well known to his associates in this Academy, and in the Natural History Society, and may be seen from his communications upon a great variety of topics, printed in their Proceedings, or often merely referred to; for he seldom wrote out his communications, and thus much of value has been lost.

In considering as we have done Dr. Gould's various and fruitful labors as a naturalist, it must not be forgotten that these were performed in the intervals of the duties of a most exacting profession, to which he was thoroughly devoted, and in which he was distinguished. He called one of his books, in which the fruits of his principal conchological work are usefully gathered and systematized, *Otia*, being, as he says, "the product of leisure moments in active professional life, and indeed of moments to no small extent stolen from sleep."

Of the high estimation in which he was held by his medical brethren we need not here speak. His term of service as President of the Massachusetts Medical Society ended only a few months before his death. His inaugural address, pronounced at the anniversary of that society, upon the Observation of Nature, was a masterly discourse, and shows better than his technical writings could do the range and the solid character of his mind. By an analysis of some of the facts contained in the census of the United States for 1860 Dr. Gould was enabled to bring out and confirm certain important conclusions respecting the geographical distribution of consumption; from which it appears that the greatest mortality from this disease occurs in the extreme north; and that this diminishes southward almost regularly with the latitude, — causing, for instance 29 per cent of all the deaths in Maine; but only 3 per cent in Arkansas. He adds some valuable suggestions as to the choice of places of resort for invalids, especially for disabled soldiers of the United States.

As a citizen Dr. Gould, upon principle, never excused himself from his full share of duty on the ground of professional or scientific preoccupations; but in the public schools and charities, in the religious society which he joined in early life, and in the scientific and various other associations of which he was an honored and influential member, he well exemplified the rule that those who are busiest are apt to have most leisure to be helpful.

A model of industry, he seldom rested from toil, and to the end each day was full to the round. Yet he found time for social intercourse, if not as much as his genial temperament and sympathetic nature craved; and he enjoyed it, when he could, with real zest. His refined taste and exact knowledge made him a discerning and judicious critic; and during his life many volumes, scientific and other, passed under his eye for friendly revision.

His love for natural scenery was genuine and hearty, and to him a source of great enjoyment, especially when he could share it with others. Unlike many naturalists to whom the shores they tread and the mountains they climb offer nothing beyond the forms they would describe and arrange, all else being as if it were not, our late associate (than whom no one ever toiled more industriously over individual forms and nice distinctions) was touched and warmed by every aspect of nature, in its grander and gentler scenes; not that he was peculiarly enthusiastic or emotional, but rather from the delicate perception and calm contemplation of a refined, devout, and responsive spirit.

He was elected into this Academy in May, 1841, and for many years he rendered useful service in various offices.

Dr. Henry Bryant, whom we lost as suddenly and unexpectedly as Dr. Gould, and from the same section of the Academy, died in Porto Rico, on the 31st of January last, in early manhood, not having completed his forty-seventh year. He was born in Boston, May 12, 1820; entered Harvard College in 1836, and was graduated in 1840, without literary distinction, but with a mind awakened to the attractions of natural science. After taking his degree of Doctor of Medicine, in 1843, he went to Paris to prosecute further his professional studies. There he received, after severe competitive examination, the post of *interne* at the Hospital *Beaujou;* but was soon obliged by ill health to resign it. Partly for the re-establishment of his health, he accepted the invitation of some officers of the French army to accompany them to Algeria, where he served during a winter campaign as volunteer surgeon.

He came home in 1847, and commenced the practice of his profession. But his precarious health obliged him finally to abandon it. Thenceforth he devoted his time principally to natural history, and particularly to ornithology, which had been a favorite pursuit from boyhood. This was the occupation most suitable to his delicate health, as it led him to live a good deal in the open air. He visited, in the way of scientific exploration, Nova Scotia, Canada and Labrador, Florida and the Bahamas, Cuba, Jamaica, and Porto Rico, some of them repeatedly, — to the great profit of his favorite science, as is shown in the various ornithological papers he communicated to the Boston Society of Natural History. Besides these papers, he made, while in Paris, a communication to the French Academy of Sciences, on the nervous system of birds, which is published in the *Comptes Rendus* for 1848.

Dr. Bryant was a very vigilant and acute observer, — one who always insisted upon seeing with his own eyes, and was not overmuch inclined to reverence authority, or rely on commonly received statements. Not only were his own personal services very considerable in the exploring of regions difficult of access, or in the investigation of facts difficult to observe; but when, as of late years, he could command the means, these were liberally given in aid of other explorers in his favorite fields.

At the outbreak of the Rebellion he went at once to Washington and offered his services to the government. Commissioned as assistant surgeon in the regular army, without waiting for a position he accepted that of surgeon in the Twentieth Regiment of Massachusetts Volunteers in July, 1861, and was made brigade surgeon in the following September, but remained with his regiment until after the disaster of Ball's Bluff in October. Afterwards he served on the staffs of Generals Lander and Shields, until he was ordered to Washington to take charge of the Lincoln Hospital, — one of the first large hospitals established, while the medical department of the army was as yet imperfectly organized, so that the whole responsibility for plan and execution came mostly upon the surgeon in charge. In this position Dr. Bryant's remarkable talent for administration was conspicuous; and his hospital was pronounced, by professional men, to be admirable. His failing health obliged him to resign his commission before the close of the war. Afterwards he went abroad with his family; and in France he bought and presented to the Boston Society of Natural History the *La Fresnaye* collection of birds, comprising nearly nine thousand specimens, and probably unequalled in types of American species by any cabinet in Europe. Returning home late in the year 1866, he sailed for the West Indies, as winter drew on, intending thence to rejoin his family in France, and in spring to return home with them. Landing at Porto Rico, he was seized, on the 30th of January, with a severe illness, of uncertain character, but rode with great suffering twenty-five miles to Araceibo, where, the next day, he closed — for us, far too soon — a life of rare excellence and promise.

REV. DR. WILLIAM JENKS, — the most venerable of our late departed associates, — died in Boston on the 13th of November last, in the eighty-eighth year of his age. He was born at Newton, Massachusetts, November 25, 1778, and was the son of Captain Samuel and Mary (Haynes) Jenks. His parents having removed to Boston in his early childhood, he received a classical education in the Latin School, and entered Harvard College in 1793, where he was devoted to the study of Greek, and was one of the founders of the Hasty Pudding Club. He was graduated in 1797, and at his death left the Hon. Horace Binney, of Philadelphia, the only survivor of his class. He married, October 22, 1797, Miss Betsey Russell of Boston, with whom he enjoyed fifty-three years of domestic companionship, as the mother of his children and his associate in varied professional cares, till her death in Boston in September, 1850. He and his wife were among the first in the country to celebrate a "golden wedding." As a teacher, pastor, and scholar in classical and Oriental studies, and as a most earnest and devoted laborer in various causes of humanity and philanthropy, he was enabled to crowd a long life with much valuable service.

After his graduation he devoted himself to the work of instruction, having pupils from various parts of the country. While pursuing the study of Theology he was employed as reader in the Episcopal Church in Cambridge, and prepared twenty-five students for college. Having adopted the views and principles of the Congregationalists, he accepted, in 1806, a pastorate in that communion at Bath, Maine, which he filled for twelve years. During the last three of those years he served as Professor of Oriental and English Literature in Bowdoin College, declining an invitation which he had received to succeed the eminent Dr. Buckminster in the ministry at Portsmouth, New Hampshire. He was ever an active friend of Bowdoin, and for many years a trustee and overseer. The degree of Doctor in Divinity was conferred upon him by Bowdoin College in 1825, and by Harvard in 1842, and that of Doctor of Laws, at a subsequent period, by the former college. While living in Maine, Mr. Jenks was Regimental and afterward Brigade Chaplain in our army, till the close of the war of 1812.

In 1818 Mr. Jenks returned to Boston, and opened a private school; continuing, however, to preach as opportunity offered, interesting himself in the religious instruction of seamen, for whom he procured the erection of free chapels, in which he ministered. He performed this service as Secretary of the Boston Society for the Moral and Religious Instruction of the Poor, being, in fact, the first "missionary at large" in the city. He opened seven distinct religious assemblies in as many different localities, which generally became established churches. His zeal, and the high estimation in which he was held, led to the gathering of a new religious society and church, who built a place of worship in Green Street, installing him its pastor in 1825, for a ministry of twenty years. While sustaining this office he undertook and completed the chief literary labor of his life, — the preparation and publication of a compend of various expository and illustrative works on the contents of the Holy Scriptures. This appeared from the press during the years 1833 – 1838, in six imperial octavo volumes, entitled "A Comprehensive Commentary on the Holy Scriptures," a list of twenty thousand subscribers having anticipated its publication. He also, subsequently, prepared his " Explanatory Bible Atlas." He was among the very first in the circle of our literary men to cultivate and pursue the study of the Oriental languages and literature; and, in connection with our late President, the Hon. John Pickering, and the Rev. Dr. Anderson, he led the way in founding the American Oriental Society. He was also an active member of the Massachusetts Historical Society. His acquaintance with the present State of Maine, while it was a District of Massachusetts, and his known philanthropical and religious interest in the aborigines, led to his appointment by this Commonwealth to induce the Indians to exchange a roaming life as hunters for that of permanent residents and tillers of the soil.

For all his trusts and duties he proved himself a most faithful and efficient agent. He gathered a large and valuable library, characteristic in its contents of his own mind and tastes. He wrote for publication numerous papers, small and brief in their size and contents, but requiring scholarship, research, and the exercise of intelligent judgment, in their subject-matter. Some of these appeared in pamphlet form, others will be found in the Collections, Transactions, or Proceedings of the Societies of which he was a member. There are poetical pieces above ordinary merit from his pen, and he left in manuscript many valuable fruits of his industrious and lengthened life.

The large and very miscellaneous library, the manuscripts and diaries which this venerable man has left behind him, bear witness alike to his conscientious industry, the wide scope of his mental activity, and the pure and lofty aims of his heart. It is to be considered that he engaged upon the most difficult linguistic studies, even of the languages of China, Hindostan, Turkey, &c., before commerce or missionary zeal, or the accumulation of the many facilities and the helpful apparatus of our times had brought to the aid of the inquirer any external guidance or labor-saving appliances. Yet, when actual need was felt in our community of men and information for opening the way to the extended intercourse and the Christian enterprise of the last forty years, Dr. Jenks proved to be a most valuable pioneer and counsellor. He had never crossed the ocean; but it is believed that he could have imparted valuable information touching their own countries, in his own home, to travellers hither from all parts of the world.

The personal character of this excellent man, distinguished as he was by many virtues, and beloved for his winning and gracious ways, deserves for its rehearsal more space than could be fitly occupied here. He was short in stature, and distinguished in bodily presence by one characteristic which has marked him during the last few years as he walked the streets, as he attended the meetings of the learned, the humane, or the religious fellowships in which his mind and heart were so engaged, or silently shared the platform or the pulpit close beside the speakers. An infirmity of hearing visited upon him a severe deprivation of what he craved so much. He carried with him a large ear-trumpet which he set upon its office when a friend approached to speak with him, or when he put a question which required an answer. The exquisite urbanity and courtesy of his manner, his venerable looks, and his grateful appreciation of the effort made to communicate with him, removed all the irksomeness and constraint from that fettered mode of intercourse. He seemed to be the last survivor of the old school of Christian gentlemen among us, — modest, deliberate, and refined in his bearing; considerate and measured in his speech, and carrying with him everywhere an atmosphere of grace and gentleness. He was a profoundly religious man. His relations and intercourse with eminent and worthy as well as with humble and untaught members of the different religious fellowships, and the wide compass of his studies, gave him a most comprehensive friendliness, and a large liberality. He exhibited constant fidelity to his own convictions, with a strong allegiance in love with those who coincided in them, and a most respectful recognition of views from which he differed, and of those who held them.

COLONEL SAMUEL SWETT, who died in Boston on the 28th of October last, had reached the age of eighty-four years. He was born at Newburyport June 9, 1782; was prepared for college at the Grammar School of his native town by his father, Dr. John Barnard Swett; and received his degree of Bachelor of Arts at Harvard, with the class of 1800. Having studied law, first with Judge Jeremiah Smith of New Hampshire, and afterwards with Judges Jackson and Livermore of Massachusetts, he commenced the practice of his profession at Salem in

1803, but relinquished it in 1810, to become a partner with his brother in the mercantile house of William B. Swett & Co. in Boston, having in the mean time married a daughter of the eminent merchant, the late Hon. William Gray. Soon after the breaking out of the war of 1812 he was active in organizing a volunteer corps in Boston, under the name of the New England Guards, of which he was the first commander, and which, under his lead, rendered important service in defence of our coast and harbor. Joining the United States Army as a volunteer, in 1814, he served as a topographical engineer on the staff of General Izard, with the rank of Major. After the declaration of peace he was an aid-de-camp to Governor Brooks, and was ever afterwards known as Colonel Swett. He had a strong taste for military service, and devoted not a little study to the science of war, even to the latest years of his life. Few men followed the campaigns of the late Rebellion with more intelligent and patriotic ardor, or were more ingenious and fertile in the suggestion of whatever might contribute to the comfort, safety, and success of the Union soldiers. He was a member, successively, of the Common Council and of the School Committee of Boston, and for three years one of its Representatives in the Legislature. He was a frequent contributor to some of our magazines and newspapers; and, on his return from Europe, whither he had gone about the time of Napoleon's return from Elba, he published in the Boston Daily Advertiser an account of his tour, and of the events he had witnessed during the memorable Hundred Days. His principal, if not his only, independent publication, however, was an elaborate account of the Battle of Bunker Hill, in a pamphlet, which went through more than one edition. He was elected into the Academy in May, 1813.

Of his five children, two sons and a daughter survive him; but his wife died in 1844, and his eldest son, a Unitarian clergyman of many remarkable gifts, in 1843. Colonel Swett bore his bereavements and infirmities with a brave heart; and his familiar figure, though sorely bent by age, was seen in our streets, and at the meetings of our own Academy, until within a few months of his death.

HENRY DARWIN ROGERS, for many years one of our most distinguished Resident Fellows, and whose name was, in consequence of his change of abode, transferred to the Associate list two years ago, died at Shawlands, near Glasgow, upon the very day of our annual meeting last year, namely, on the 29th of May, 1866. Born in Philadelphia on the 1st of August, 1808, he had not completed his fifty-eighth year.

He was the third in age of four brothers, — only two of whom survive, — who, inspired and guided by their father, Dr. Patrick Kerr Rogers, Professor of Natural Philosophy and Chemistry in William and Mary College, Virginia, — as if by mutual agreement, all gave their lives to the cultivation and teaching of physical science. From his youth, the subject of the present notice evinced so decided a predilection for these studies and became so proficient in them, that, in his twenty-second year, he was made Professor of Physics and Natural History in Dickinson College, at Carlisle, Pennsylvania, where, at the same time, he edited a periodical called a "Messenger of Useful Knowledge." Here he began his first independent studies in structural and dynamical geology, in which he was destined greatly to excel.

Seeking better opportunities, he soon resigned his chair, and passed a year in England, studying chemistry under the late Professor Turner, and accompanying the late De la Beche in his geological explorations. Returning to Philadelphia, he devoted his whole time to scientific investigations. In conjunction with our other lately deceased associate, Professor Bache, he made and published a valuable series of analyses of the ashes of coal; and he aided his brother, our own William B. Rogers, in experiments upon "the laws of the Voltaic battery" (published in Silliman's Journal), and in preparing two memoirs upon "the Tertiary Formations of Eastern Virginia," which were published in the Transactions of the American Philosophical Society. At the request of the Council of the British Association for the Advancement of Science, he prepared a report on the Geology of North America, which was printed in the third Annual Report of that body, and was in part republished in this country in Bradford's edition of Murray's Encyclopædia of Geography.

His first systematic geological labor was that of conducting the survey of the State of New Jersey, of which he published a report in 8vo, with a geological map. While thus engaged a similar survey of the great State of Pennsylvania was provided for by the Legislature, and placed under his direction. This, the most important scientific labor of his life, was commenced early in the year 1836, and, with various interruptions and embarrassments growing out of legislative inaction, was completed by him in the spring of 1855. The fruits of these prolonged labors have been given to the world in his great work entitled "Geology of Pennsylvania, Government Survey; with a General View of the Geology of the United States, Essays on the Coal Formation and its Fossils, and a Description of the Coal Fields of North America and Great Britain." This great work is contained in three royal quarto volumes, illustrated by forty-five sketches of scenery, forty-seven geological sections, two plates of columns of strata, twenty-three plates of coal fossils, and seven hundred and seventy-eight wood engravings of views and diagrams of coal-beds, &c., and accompanied by a general geological map of the State, a special map of the anthracite coal-basins, and two large sheets containing the nine general sections, elucidating the geological map.

During the early progress of this work he produced, in conjunction with his brother, William B. Rogers, the well-known memoir "On the Physical Structure of the Appalachian Chain," unfolding certain dynamical laws which have regulated the elevation of mountain chains. About the same time (1842) he published an elaborate paper on the origin of the Appalachian coal strata, bituminous and anthracitic, containing much original observation and important speculative views; his brother pursuing a parallel system of investigations in Virginia, where the formations are identical with those of Pennsylvania. The result of the labor of these two brothers, carried on for ten years together, was the grand discovery of the structural unity of central North America, between the Appalachian chain and the Rocky Mountains, the great lakes and the Delta inclusive; a fact of such importance that it must serve in future as a guide to all general researches; since it is not reasonable to suppose that so large a portion of the earth's surface should have been formed in any other than the normal mode. Occupying at this time the chair of Geology in the University of Pennsylvania, he gave instruction in that science in the intervals of his labors on the State Survey. He also delivered courses of lectures at the Lowell Institute and elsewhere; on all such occasions showing that readiness and felicity of diction, without the use of notes, for which he had always been remarkable.

He was one of the founders, and an early President, of the American Association of Geologists, which, after an active and most useful career, expanded into the American Association for the Advancement of Science. Although chiefly devoted to geological research, Professor Rogers paid much attention to those sciences of which geology is the extended application, — Natural History, Climatology, and Physical Geography.

In 1855 he contributed to Keith Johnson's Physical Atlas the Geological Map of the United States and British North America; and the Chart of the Arctic Basin, with the accompanying letter-press, and the text of the somewhat later Geographical Atlas of North America, is from his pen. The philosophical questions arising from these studies especially interested him; indeed, the whole bent of his mind was in an eminent degree philosophical rather than technical.

In the year 1857, while in Edinburgh superintending the publication of his Geological Report, he was appointed Regius Professor of Natural History and Geology and Curator of the Hunterian Museum, in the University of Glasgow, and thenceforth became a resident of Scotland. While devoting himself to the duties of his chair, he became associated with Jardine and Balfour in the editorship of the Edinburgh New Philosophical Journal, contributed a paper on "The Laws of Structure of the more disturbed Zones of the Earth's Crust" to the Transactions of the Royal Society of Edinburgh, and found time for a number of scientific essays, published in Blackwood and Good Words, as well as for occasional lectures on his favorite geological topics in London, Edinburgh, and elsewhere.

On revisiting, as it proved for the last time, his native country, in 1855, his friends were concerned to see that his health had given way under his prolonged and excessive labors, overtasking a constitution, elastic indeed, but not naturally robust. He returned to Glasgow, reinvigorated it was thought; but we soon heard, with sorrow, that he was no more.

Although the eminent position in geology held by our late associate, and somewhat of the nature and dominant influence of the general views of the associated brothers, may be inferentially gathered from this biographical sketch, yet we are, for obvious reasons, prevented from entering upon their consideration here, nor indeed is it necessary to do so. Of him whom we have lost, suffice it to record, here, in simplest and briefest phrase, that he was a most accomplished investigator, a graceful and persuasive teacher, and fascinating companion; that to rare powers and attainments he added a lively sympathy in all the interests of humanity, and a courageous devotion to whatever he deemed just and true.

ALEXANDER DALLAS BACHE, born in Philadelphia on the 19th of July, 1806, was the son of Richard Bache, and grandson of the only daughter of Benjamin Franklin. His mother was Sophia Dallas, daughter of Alexander J. Dallas, of a family also well known in the history of this country. Remarkable from early boyhood for his aptitude in the acquisition of learning, he was appointed a cadet in the National Military Academy at West Point before he had completed the fifteenth year of his age. Here, although the youngest pupil, he soon reached a high grade of scholarship, and maintained it throughout the course, graduating in 1825 at the head of his class; — a class of such marked ability that it furnished no less than five successful candidates to the corps of Engineers. It has been mentioned as a solitary instance in the history of the Academy, noted for its rigid discipline, that he passed through the entire course of four years without a single mark of demerit, and, what may be hardly less uncommon, without calling forth the least manifestation of envy. Indeed his classmates, as well as the teachers, seem to have taken pride in the high character and scholarship of the youthful cadet. His room-mate, several years his senior, and by no means noted for studious or regular habits, assumed the office of guardian, sedulously protecting him from interruption or intrusion during the hours of study, and, it is said, habitually excused his own shortcomings by pleading the importance of the duty he thus performed. Not that young Bache himself needed a guardian, except for his tender years and to protect him from hindrance on the part of others. Sensible beyond his years of the responsibility which would devolve upon him in the support of his widowed mother and her younger children, and of the obligations incurred in his education at the National School, he resolved from the first to exert his utmost energies, — doubtless not unconscious, moreover, that, as a descendant of Franklin, something more than ordinary might be expected from him. Upon such a mind as his, the adage *noblesse oblige* could not but have a powerful influence.

Upon his graduation he was selected, on account of his high standing, to remain at the Academy as Assistant Professor, — a position which gave him a desired opportunity to review and extend his studies. But after a year in this service he was, at his own request, assigned to engineering duty at Newport, Rhode Island, under the late General, then Colonel Totten. Here for two years he was engaged in constructing fortifications, devoting his extra hours to the study of physics and chemistry.

The most important event of this period, however, and doubtless the most influential upon his future success, was the acquaintance and engagement he formed with Miss Fowler, the daughter of an old and highly respected citizen of Newport. The scanty pay of a Lieutenant of Engineers, charged with the support of his mother and the younger members of her family, forbade all but the remote prospect of marriage; when, fortunately as unexpectedly, he was invited to take the chair of Natural Philosophy and Chemistry in the University of Pennsylvania, at Philadelphia. This, while it opened to him his scientific career, enabled him at once to gratify the warmest wish of his heart, and to secure the companion and helpmate, who, devoting all her thoughts and powers to encourage and assist him, contributed most efficiently to his distinguished usefulness throughout his active life.

Important as was the offered position to his hopes and necessities, and congenial to his tastes, the young officer so far distrusted his ability to fill it, that he prudently retained his connection with the army while the trial was made, — taking a year's leave of absence without pay. But before the year elapsed his fitness for the vocation was assured, and the entire confidence of the authorities and pupils of the University secured. He could now undertake to do something for the advancement of science by researches of his own. He became a member, and soon an active officer of the Franklin Institute, then newly established for the promotion of the mechanic arts, and was thus brought into intimate association with the principal manufacturers, engineers, and artisans of the city, as well as with persons more directly engaged in scientific pursuits; workshops and laboratories were thrown open to him, and other facilities supplied which he could not otherwise have commanded; and skilful men on every side offered ready assistance in realizing the conceptions of his suggestive mind. No doubt his descent from the illustrious philosopher and statesman, whose name the Institute bears, added somewhat to the commanding influence which he acquired, mainly and worthily, however, by his own industry, ability, courtesy, and rare powers of administration. The volumes of the Journal of the Franklin Institute, from 1828 to 1835 inclusive, abundantly testify to his scientific activity.

The most important of these investigations was that upon the causes of the explosion of steam-boilers, carried on by the Institute under his direction, and soon recognized by the General Government by an appropriation to cover the expense. The results of these elaborate researches and experiments, executed with skill and interpreted with logical discrimination, were embodied in a series of propositions which, after the lapse of more than thirty years, have not been superseded by any others of more practical value. The most frequent cause of explosion was found to be the sudden generation of steam from allowing the water to become too low, and its subsequent contact with the overheated sides of the boiler. Other assigned causes, such as the generation of gas from the decomposition of water, or the dispersion of water in the form of spray through superheated steam, were successively disproved.

Early elected into the American Philosophical Society, Professor Bache was then associated with Hare, Espy, and other investigators. Erecting for the purpose an observatory in the yard of his dwelling, and with the aid of his wife and his pupil, afterwards his successor, Professor Frazer, he accurately determined, for the first time in this country, the periods of the daily variation of the magnetic needle, and afterwards, the connection of the fitful variations of the direction of the magnetic force with the appearances of the aurora borealis. He also, in connection with Mr. Espy, made a minute survey of the relative change of position of the trees and other objects upturned by a tornado which passed over New Brunswick, New Jersey; and deduced the fact that the tornado was a progressive and ascending column of rarefied air, to which objects at a distance on either side of the track were drawn; and not a horizontal rotation at the surface, which would tend to throw them outward. In connection with Professor Courtenay he made a series of determinations of the magnetic dip at various places in the United States. Terrestrial magnetism was with him a favorite subject, to which he continued to make valuable contributions at intervals during his life. He was also interested in the phenomena of heat; and he was the first to show, contrary to the generally received opinion, that the radiation, and consequently the absorption, of dark heat is not affected by color.

It should be noticed that these investigations were prosecuted in the intervals of time not occupied by his duties as Professor in the University, into which his main strength was heartily thrown, and which absorbed several hours a day, nor claimed by committees of the Franklin Institute and the Philosophical Society. He was enabled to execute these multifarious labors, and to establish his character for promptitude in all his engagements, by rigid system and an exact allotment of his time. He thus found opportunity for all his duties, and, among them, to attend to the claims of friendship and society.

Professor Bache had just attained the thirtieth year of his age when, in 1836, the Trustees of the Girard College for Orphans, preparatory to organizing that nobly-endowed charity, determined to select a suitable person as President, and to send him abroad to study the organization and methods of instruction of similar institutions in Europe. The eyes of the community being with one accord turned to him, he was prevailed upon to accept this important position, and — with lingering regret for the scientific pursuits from which he was likely to be separated — to turn his attention and powers of administration in a new direction. He visited Europe under the most favorable circumstances for becoming intimately acquainted with its scientific and educational institutions; he devoted two years to the work, and, on his return, embodied the results in his well-known Report to the Trustees of Girard College. This report fills a large 8vo. volume, and is an almost exhaustive exposition of the systems of education in use at the time in the schools of England, France, Germany, Switzerland, and Italy, — the facts all founded on personal inspection, and recorded on the spot with his habitual regard to entire accuracy; and the practical inferences and pregnant suggestions with which it abounds show how thoroughly he had entered into a new line of inquiries.

He was now ready to commence the organization of the College; but this being deferred by the Trustees, Professor Bache, desirous of turning the knowledge he had acquired to immediate practical account, offered his services gratuitously to the municipal authorities of Philadelphia, and entered upon the organization of a system of public education for that city on an improved basis. At the end of a year, finding the Trustees of Girard College still unprepared to open the institution, he declined the salary while yet retaining the office of President, and devoted his time mainly to the organization of the schools, now accepting from the city the salary needful for his support, but much smaller than that he relinquished.

In 1842, having successfully established what was regarded as the best system of combined free education which had at that time been adopted in this country, and Girard College still remaining in a statical condition, he resigned his connection with it, and, yielding to solicitations of the Trustees of the University, returned to his former chair of Natural Philosophy and Chemistry. He could now resume the favorite pursuit of his life, the cultivation of physical science, — which, however, he had never wholly abandoned. While abroad, with a set of portable instruments, he kept up a series of magnetical observations at selected points, with the view of accurately ascertaining the relative strength of the magnetic force in Europe and America, by comparison with parallel observations made in this country. He had also engaged in the combined enterprise, proposed and furthered by the British Association, to determine the fluctuation of the magnetical and meteorological elements of the globe by contemporaneous observations at many widely separated stations. For this he established an Observatory at Girard College, which was equipped with instruments by the Trustees, and supported by the American Philosophical Society and several liberal citizens. The observations here made, which were kept up, at intervals of one and two hours, night and day for five years, form a rich mine of statistics from which, down to the last two years of his life, he continued to draw interesting series of results without exhausting the material.

A new epoch in Professor Bache's life now approached. Before he was well settled in his old position at the University, in November, 1843, upon the death of Mr. Hassler, he was called to the charge of the United States Coast Survey, of which for about twenty years he was the efficient and distinguished head. His education at West Point, his well-proved skill in investigation, his thorough familiarity with the principles and details of applied science, all the acquisitions and experience of his previous life, and, not least, his placid and even temper, urbane deportment, exquisite tact, and executive ability, all conspired to his eminent fitness for the place, and to the achievement of the immense development and complete success of this great national undertaking in his hands. We cannot enter here into the history of the United States Coast Survey, intimately connected as it is with that of its late superintendent. It must suffice to say, that when Professor Bache took charge of it, the survey was in its infancy, had touched upon only four or five hundred miles of the Atlantic coast, was subject to misapprehension, annually assailed by ignorant prejudice, and in danger of being suspended or abolished. Before he died, it had extended its lines over the whole coast of the national domain, upon both oceans, from the Bay of Fundy to the Rio Grande, and from San Diego to Puget Sound; had conquered unjust prejudice, silenced opposition, and now passes into the charge of our associate the present incumbent, firmly established as one of the bureaus of the Executive Government.

The importance of the survey, always appreciated by the mariner, was recently impressed upon the general public, by the essential service which it rendered during the war of the rebellion. Its accurate charts and sailing directions guided our squadrons along the Southern coast; its officers accompanied and piloted them in the attack upon every stronghold; the superintendent himself was personally called into frequent consultations over plans of attack or defence; besides serving upon an important confidential commission, to which various projects for improving the art of war were referred, and also as a member of that great voluntary association for the relief of imminent wants and mitigation of the soldier's suffering, the Sanitary Commission. Indeed Mr. Bache may be ranked among the victims of the service; for it was when, overwhelmed with other public labors, he planned, at the request of the Governor of the State, a line of defences for his native city of Philadelphia, and was personally superintending their construction, that his health gave way under the first indications of the cerebral disease which not long afterwards arrested his labors, gradually and peacefully withdrew him from the outer world, and nearly three years afterwards terminated his invaluable life. He died on the 17th of February, 1867, in the sixty-first year of his age.

The amount and value of Mr. Bache's labors and public services would be much under-estimated if we omitted to state that he was likewise, while at the head of the Coast Survey, the Superintendent of Weights and Measures, in which capacity he completed the work, begun by Mr. Hassler, of constructing accurate standards for distribution among the several States of the Union; — that he was one of the Commission appointed to examine the condition of the Lighthouses of the United States, bore a leading part in the organization of the admirable system now in operation, and continued to be an influential member of the Lighthouse Board in which the original Commission was merged; that he was the President of the National Academy of Sciences recently chartered by Congress; — and, finally, that he was one of the Regents of the Smithsonian Institution, named in the act of incorporation in 1846, and was continued in this important trust by successive re-elections until his death. To him probably more than to any other member of the Board the credit is due of shaping the policy of the establishment, of retrieving initial mistakes, and of securing the appropriation of the income of this most important trust mainly to the advancement of science.

In all these positions, and especially in the often difficult management of the affairs of the Coast Survey, his extraordinary influence and success may be attributed to his sterling honesty and simplicity as well as fixedness of purpose, to the even balance of a symmetrically developed and well-stored mind, to a quiet winning persuasiveness which, on a personal interview, rarely failed to convert even an opponent into a friend, and, in a word, to a consummate practical wisdom and shrewdness which may somewhat remind us of his distinguished ancestor. The conduct of affairs and details of administration which absorbed most of his best years, and for which he was so peculiarly fitted, took from him the opportunity of doing much that he had planned and might have done in original investigation. But even in this field he has left a name not unworthy of his lineage.

VICTOR COUSIN, the only Foreign Honorary Member deceased during the past year, died at Paris, about the middle of January last, in the 75th year of his age. His career has been long, brilliant, and prosperous. For nearly half a century his name has been indisputably the first among the philosophers of France, while his numerous writings have occupied and rewarded the attention, not only of the special students of psychological and metaphysical science, but of educated and thoughtful men generally. Though not well fitted either by his tastes or habits to gain political distinction, or to hold high office in the state, he was for a while a prominent member of that remarkable group of men, eminent in letters and science, who were the legislators and statesmen of France under Louis Philippe; he was created Councillor of State, member of the Royal Council of Public Instruction, Peer of France, and finally entered the Cabinet under the short-lived ministry of Thiers, in 1840, as Minister of Public Instruction. After the defeat of that ministry, he retired to his old pursuits and apartments in the Sorbonne, where he occupied, as a bachelor, the same rooms almost continuously for nearly thirty-five years, constantly employed on his numerous and successful publications, collecting a noble library, amassing an ample fortune, and leaving at his death both his books and money for the encouragement of philosophical studies.

That Cousin was able to accomplish so much, though he began life without any extraneous advantages, indicates what has been the essentially democratic constitution of society in France during the first half of the present century, whatever may have been for the time its nominal form of government. Mobility of fortune and station, splendid prizes for ambition, and a career open in any direction for talents and character have stimulated youthful effort at Paris ever since the Revolution of '89. Cousin entered upon the stage at the right time, and with the right temperament, to profit by these advantages. He was the son of a watchmaker at Paris, where he was born November 28, 1792. He finished the earlier part of his education at the Lycée Charlemagne, obtaining a number of prizes at the competitive examination, and the first honors in the department of rhetoric. Then he became a pupil in the Normal School, where, under the tuition of Laromiguière, Royer-Collard, and Maine de Biran, he completed his elementary training in philosophical studies with so much promise that he was placed in the way of rapid promotion as a teacher. He became Tutor of Greek in this school in 1812, and Master of Conferences in Philosophy only two years afterwards, acting at the same time as a Professor in this department in the Lycée Napoleon. In 1815, at the early age of twenty-three, he was appointed Adjunct Professor to Royer-Collard in the chair of Philosophy at the Faculty of Letters in the Sorbonne, taking upon himself, as is usual in such cases, the entire performance of the duties of the office, his principal then virtually quitting philosophical for political pursuits, and retaining the Professorship only as a sinecure. Never was rapid advancement in a high profession more fairly earned, or better justified by the result. With great facility of acquisition, and an immense capacity for labor, Cousin had also the ardent temperament, the unflagging interest in his vocation, and the rhetorical power which are needed to attract and animate a band of zealous young disciples. With such he soon found himself surrounded; and ten years afterwards he was able to allude with excusable pride to the fact, that the three most distinguished graduates of his first class in philosophy at the Normal School, in 1816, were Bautain, Jouffroy, and Damiron. Indeed, it may fairly be said of him, that his best works at this early period were his pupils.

Yet his pen was by no means idle; he fed the press with a succession of voluminous publications, any one of which would have cost most men many laborious years. Before 1827, he had completed an edition of Proclus, edited from the MSS., with notes, in six octavo volumes; about the same time appeared his edition of Descartes, in eleven volumes; and while these were passing through the printer's hands, he was also occupied on a translation of all the works of Plato, with elaborately prepared arguments, in thirteen volumes; which was not completed till 1840. A quarto volume of the previously unpublished writings of Abelard appeared under his editorial care in 1836, and three years afterwards he published his translation of Tennemann's Manual of the History of Philosophy.

These were only editorial labors expended upon the writings of others. The most important of his own philosophical works, many of which had previously passed through several editions, reappeared in a collected form in 1847, in twenty-two volumes. But his literary activity was not even then exhausted. Turning from philosophy proper to history and *belles-lettres*, he found amusement and occupation for his declining years in writing about a dozen volumes of biographical sketches and memoirs, illustrative of the state of French society and politics in the seventeenth century, and perhaps a score of miscellaneous publications, many of which first appeared in Reviews and other periodical collections. Separate notice should also be taken of his labors in the cause of public education; two elaborate and extensive reports, made by him, under government authority, on the state of primary and public school instruction, the one in Holland, and the other in Prussia and other portions of Germany, appeared in 1838 and 1840, and had considerable influence in modifying the school system not only in France, but here in America. On the whole, a busier and more productive life, and one more efficient in its action upon the opinions and conduct of men, could hardly be found anywhere in the annals of letters and philosophy.

Cousin visited Germany for the first time in 1817, and there became personally acquainted with Hegel, whose conversation and writings had a marked influence upon his subsequent speculations in philosophy; but after the revolution of 1848 he forsook and disavowed this school of pantheistic metaphysics. Then, also, after he had been for a quarter of a century a leader of the liberal and *doctrinaire* party in the long warfare between the University and the Church, he read his palinode, and joined heartily in the attempt made by his philosophical associates in the Institute to re-establish, by a series of brief popular treatises, the main doctrines of morality and religion, of order and law, in the minds of a deluded and exasperated populace. His contribution to this combined effort was a singular one; it was a republication of Rousseau's well-known "Savoyard Vicar's Confession of Truth," with notes and a brief preliminary treatise, both even more earnestly religious in tone than the text. It must have been edifying to the numerous students of the philosophical doctrines which he had been expounding for so many years, to find him maintaining in these notes, in opposition to Rousseau, the doctrine of the efficacy of prayer. Another tract which he contributed to this remarkable series, entitled "Justice and Charity," contained a refutation of the doctrines of the Socialists. His former lectures on the True, the Beautiful, and the Good, were also republished by him in 1853, so materially amended and purified as to win for him the hearty applause of the most conservative party in the Church and the State. Indeed, it was only in the earliest portion of his career that Cousin espoused liberal opinions in politics with a zeal that lacked discretion.

In his second visit to Germany, in 1825, he was arrested by the police on suspicion of complicity in some Carbonari plots, and suffered an imprisonment of a few weeks at Berlin; and he profited by this enforced leisure to make a more thorough study of the Hegelian philosophy. He had been silenced as a lecturer by the Villèle ministry at home; but the triumph of the Martignac party in 1827 restored to him and his colleagues the exercise of their professorial functions. Then, as one of the illustrious triumvirate with Guizot and Villemain, he contributed his full share to that unparalleled triumph of letters, philosophy, and eloquence, which gave greater attraction and renown for a season to the lecture-rooms at the Sorbonne than belonged to any legislative or forensic assembly in Europe. A hall could not be found spacious enough to accommodate the immense crowd, representing all that was most distinguished in rank, fortune, and reputation in Paris, which flocked daily to hear three University Professors lecture upon philosophy, history, and literature. The sensation created was all the greater, as it had the aspect of a political triumph; and each speaker was vociferously applauded at the utterance of every remark which, whether so intended or not, could be construed into a political allusion. In fact, these three courses of lectures, delivered in 1828, were among the chief determining causes of the Revolution of 1830, and the peculiar character of the government by which it was succeeded.

The reputation of Cousin culminated at this epoch; never afterwards did he appear so original and ingenious as a thinker, or so polished and eloquent as a writer, as when stimulated by this great popular success. His lectures were immediately published, and showed both the excellences and defects of his manner. They are intensely French in conception, taste, and execution; they abound in glittering generalities and perilous leaps in reasoning; and the rhetoric, though ornate, is too often declamatory; but they must be tried by the writer's national standard, and not by English principles of criticism. They were excellent in their kind, though inferior in depth and originality of thought, and in all the higher merits of philosophical disquisition, to the admirable lectures on history delivered at the same period by Guizot. The lectures of the following year, on the philosophy of the eighteenth century, though less popular, were really of a higher quality, more carefully studied, less rhetorical, richer in matter, more precise in statement, and more instructive in exposition and criticism. Regarded generally, they are Cousin's best work, his ablest contribution to the history of philosophy. Taken in connection with the course of the preceding year, they afford a satisfactory view, an interesting exposition and defence, of the writer's system of philosophy, so far at least as he could be said to have any system sufficiently original to be appropriately designated by his name. He was avowedly an eclectic; not professing to make discoveries, or to invent a theory of his own, he chose the humbler but more useful task of expounding and criticising the theories of predecessors, adopting some things and rejecting others, and thus piecing together out of selected fragments a body of coherent doctrine. From the Scotch philosophers, as represented by Reid and Stewart, he borrowed a method of inquiry, a theory of the foundation of morals, and a refutation of the sensualism and materialism that had been taught by Helvetius and Condillac. Among his countrymen, he was chiefly indebted to Maine de Biran, whom he followed implicitly in his theories of personality, of causation, and of the freedom of the will. From the Germans, especially from Schelling and Hegel, but with considerable modifications, he adopted his doctrines of the absolute, of the impersonality of reason, and of the *a priori* method of studying the necessary development of historical events. The principal result of Cousin's labors, therefore, may be said to be the reconciliation, and the general adoption in France, of the leading dogmas of the Scotch and German schools of philosophy.

To have the reputation of being a skilful expounder and critic of other people's opinions may not appear very flattering; yet such work ought not to be held in light esteem. To break up the distinctions between various schools, to harmonize doctrines which have been made to appear incongruous only because originally incorporated into rival systems, and to give universal currency to the treasures of thought, learning, and taste, which had otherwise been confined to one language and people, is an office which has sure claims on the gratitude, though it may not challenge the admiration, of mankind. One cannot, even if he would, avoid incorporating into his own system some portion of the labors of others, whether these elements remain as they were when first announced, or have since passed out into the world as familiar principles of thought or conduct; and Cousin will probably be remembered by posterity, not as the founder of a new method or school, but as an able historian and critic of previous systems of metaphysics, and an eloquent expounder and teacher of many truths in philosophy which have long been the common heritage of mankind.

The accessions to our ranks during the past year have been unusually large, consisting of sixteen Resident and four Associate Fellows, and four Foreign Honorary Members.

In the Foreign Honorary Membership, Mr. Bentham, President of the Linnæan Society, replaces the late Professor Lindley.

M. Faye, of Paris, replaces Encke, of Berlin.

Professor Rankine, of Glasgow, was chosen in place of the late Admiral Smyth, and Henry Sumner Maine, in that of the late Dr. Whewell.

In conclusion, the Council submitted a nomination to fill the vacancy in the list of Foreign Honorary Members made by the decease of M. Cousin; also nominations to the list of Associate Fellows.

The Annual Report of the Treasurer was received, read, and ordered to be entered on the records.

Professor Lovering, as chairman of the Committee of Publication, presented the report of this Committee, accounting for expenditures in printing the Memoirs and Proceedings under the appropriations of the past year.

Professor Henck, as chairman of the Library Committee, presented the report on the condition of the Library.

A recommendation from this Committee to increase the salary of the Assistant Librarian, was referred to the Rumford Committee.

Professor Lovering presented a report from the Rumford

Committee, recommending an appropriation for the purchase of certain Journals and other publications. The report was accepted and 532 dollars were appropriated to the use recommended.

Mr. C. M. Warren made a brief report from the Committee to provide accommodations for the Academy.

Professor Eliot was excused from further service on this Committee, and Professor Cooke was appointed in his place.

Action on the appropriations recommended by the Treasurer was postponed to an adjourned meeting.

The following gentlemen were elected members of the Academy: —

Dr. C. Edward Brown-Séquard, to be a Resident Fellow in Class II. Section 3.

Commodore John Rodgers, U. S. N., to be a Resident Fellow in Class I. Section 4.

Dr. J. Lawrence Smith of Louisville, Kentucky, to be an Associate Fellow in Class I. Section 3.

Hon. Horace Binney of Philadelphia, to be an Associate Fellow in Class III. Section 1.

Hon. Daniel Lord of New York, to be an Associate Fellow in Class III. Section 1.

Major-General Sabine, President of the Royal Society, London, to be Foreign Honorary Member in Class II. Section 1, in place of the late Admiral Duperrey.

Nominations for election into the Academy were presented and read.

The annual election resulted in the choice of the following officers for the ensuing year: —

ASA GRAY, *President.*
GEORGE T. BIGELOW, *Vice-President.*
WILLIAM B. ROGERS, *Corresponding Secretary.*
CHAUNCEY WRIGHT, *Recording Secretary.*
JOHN C. LEE, *Treasurer.*
FRANK H. STORER, *Librarian.*

Council.

Thomas Hill, Joseph Lovering, John B. Henck,	of Class I.
Louis Agassiz, Jeffries Wyman, Charles Pickering,*	of Class II.
Robert C. Winthrop, George E. Ellis, Andrew P. Peabody,	of Class III.

Rumford Committee.

Joseph Lovering,
Morrill Wyman,
William B. Rogers,
Joseph Winlock,
Wolcott Gibbs,
Josiah P. Cooke,
Frank H. Storer.

Committee of Finance.

Asa Gray,
John C. Lee, } *ex officio*, by statute.
Thomas T. Bouvé, by election.

The other Standing Committees were appointed on the nomination of the President, as follows: —

Committee of Publication.

Joseph Lovering,
Jeffries Wyman,
Charles W. Eliot.

Committee on the Library.

John B. Henck,
Charles Pickering,
John Bacon.

Committee to audit the Treasurer's Accounts.

Charles E. Ware,
Charles J. Sprague.

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* Elected at the adjourned meeting.